

FOUO 0422860

APPENDIX

A

THIS IS THE GENERAL LIST OF ARCONIUM ALLOYS. CUSTOM ALLOYS/FORMULATIONS ARE AVAILABLE TO SUIT YOUR SPECIAL REQUIREMENTS.

YOUR SPECIAL REQUIREMENTS			U.S.		Temperature °C		Alloy	Density	
Ostalloy	Tempe	°F	Temperature °C		Alloy			lb. in ⁻³	g. cm ⁻³
Number	Solidus	Liquidus	Solidus	Liquidus	Solidus	Liquidus			
51	51	E	51	10.7	E	10.7	62.5 Ga, 21.5 In, 16 Sn	.2348	6.50
60	60	E	60	15.7	E	15.7	75.5 Ga, 24.5 In	.2294	6.35
117	117	E	117	47	E	47	44.7 Bi, 22.6 Pb, 19.1 In 8.3 Sn, 5.3 Cd	.3307	9.16
129133	129		133	54		56	49.3 Bi, 20.8 In, 17.9 Pb, 11.5 Sn, .5 Cd	.3253	9.01
134149	134		149	57		65	47.5 Bi, 25.4 Pb, 12.6 Sn, 9.5 Cd, 5 In	.3419	9.47
136	136	E	136	58	E	58	49 Bi, 21 In, 18 Pb, 12 Sn	.3253	9.00
136156	136		156	58		69	49 Bi, 18 Pb, 18 In, 15 Sn	.3249	9.00
142149	142		149	61		65	48 Bi, 25.7 Pb, 12.7 Sn, 9.6 Cd, 4 In	.3429	9.50
143	143	E	143	61.5	E	61.5	61.72 In, 30.78 Bi, 7.5 Cd	.2895	9.01
156158	156		158	68		69	52 Bi, 26 Pb, 22 In	.3450	
158	158	E	158	70	E	70	49.5Bi, 27.3Pb, 13.1Sn, 10.1Cd	.3458	9.58
158165A	158		165	70		73	50.5Bi, 27.8 Pb, 12.4Sn, 9.3 Cd	.3491	9.67
158173	158		173	70		78	50 Bi, 34.5 Pb, 9.3 Sn, 6.2 Cd	.3579	9.89
158194	158		194	70		90	42.5 Bi, 37.7 Pb, 11.3 Sn, 8.5 Cd	.3541	9.81
160190	160		190	71		88	42 Bi, 37 Pb, 12 Sn, 9 Cd	.3541	9.81
162	162	E	162	72	E	72	66.3 In, 33.7 Bi	.2886	7.99
165200	165		200	73		93	50 Bi, 39 Pb, 7 Cd, 4 Sn	.3650	10.11
170180	170		180	77		82	50 Bi, 39 Pb, 8 Cd, 3 Sn	.6570	10.13
171	171	E	171	77.5	E	77.5	48.5 Bi, 41.5 In, 10 Cd	.3066	8.49
178	178	E	178	81	E	81	54.1 Bi, 29.6 In, 16.3 Sn	.3058	8.47
178185	178		185	81		85	50.4 Bi, 39.2 Pb, 8 Cd, 1.4 In, 1Sn	.3664	9.80
190200	190		200	87		93	51.45 Bi, 31.35 Pb, 15.2 Sn, 1 In	.3480	9.64
197	197	E	197	92	E	92	51.6 Bi, 40.2 Pb, 8.2 Cd	.3700	10.25
200	200	E	200	93	E	93	44In, 42 Sn, 14 Cd	.2693	7.46
200210	200		210	93		99	50 Bi, 31 Pb, 19 Sn	.3458	9.58
202	202	E	202	95	E	95	52 Bi, 30 Pb, 18 Sn	.3465	9.60
203204	203		204	95		95.5	52 Bi, 32 Pb, 16 Sn	.3500	9.69
203219A	203		219	95		104	56 Bi, 22 Pb, 22 Sn	.3382	9.37
203219B	203		219	95		104	50 Bi, 30 Pb, 20 Sn	.3440	9.53
203219C	203		219	95		104	46.1 Bi, 19.7 Pb, 34.2 Sn	.3270	9.06
203239	203		239	95		115	50 Bi, 25 Pb, 25 Sn	.3364	9.32
203264	203		264	95		129	51.6 Bi, 37.4 Sn, 6 In, 5 Pb	.3097	8.58
203277	203		277	95		136	36 Bi, 32 Pb, 31 Sn, 1 Ag	.3328	9.22
205225	205		225	96		107	45 Bi, 35 Pb, 20 Sn	.3465	9.60
205271	205		271	96		133	34 Pb, 34 Sn, 32 Bi	.3303	9.15
208221	208		221	98		105	52.2 Bi, 37.8 Pb, 10 Sn	.3599	9.97
208234	208		234	98		112	51.6 Bi, 41.4 Pb, 7 Sn	.3657	10.13
212	212	E	212	100	E	100	35.7 Sn, 35.7 Bi, 28.6 Pb	.3370	9.34
215226	215		226	102		108	54.5 Bi, 39.5 Pb, 6Sn	.3660	10.14
219	219	E	219	104	E	104	53.9 Bi, 25.9 Sn, 20.2 Cd	.3111	8.67
229	229	E	229	109	E	109	67 Bi, 33 In	.3180	8.81
242248	242		248	117		120	55 Bi, 44 Pb, 1 Sn	.3751	10.39
244	244	E	244	118	E	118	52 In, 48 Sn	.2635	7.30
244257	244		257	118		125	50 In, 50 Sn	.2635	7.30
244268	244		268	118		131	52 Sn, 48 In	.2635	7.30
244293	244		293	118		145	58 Sn, 42 In	.2635	7.30
248250	248		250	120		121	55 Bi, 44 Pb, 1 In	.3751	10.38
248266	248		266	120		130	40 In, 40 Sn, 20 Pb	.2837	7.86
248306	248		306	120		152	42 Pb, 37 Sn, 21 Bi	.3307	9.16

E = Eutectic

05871240 05871240

Ostalloy Number	Temperature °F		Temperature °C		Alloy	Density	
	Solidus	Liquidus	Solidus	Liquidus		lb. in. ⁻³	g. cm. ⁻³
250277	250	277	121	136	55.1 Bi, 39.9 Sn, 5 Pb	.3130	8.67
253	253	E	253	123	E	.2751	7.62
255	255	E	255	124	E	.3769	10.44
255259	255	259	124	126	58-Bi, 42 Pb	.3754	10.40
257	MP	257	MP	125	70 In, 15 Sn, 9.6 Pb, 5.4 Cd	.2754	7.63
257302	257	302	125	150	95 In, 5 Bi	.2673	7.40
262269	262	269	128	132	75 In, 25 Sn	.2720	7.30
262271	262	271	128	133	56.84 Bi, 41.16 Sn, 2 Pb	.3105	8.60
266343	266	343	130	173	50 Pb, 30 Sn, 20 Bi	.3419	9.47
268338	268	338	131	170	51.5 Pb, 27 Sn, 21.5 Bi	.3458	9.58
268375	268	375	131	190	80 In, 20 Sn	.2710	7.30
270282	270	282	132	139	45 Sn, 32 Pb, 18 Cd, 5 Bi	.3115	8.63
275	MP	275	MP	135	57.4 Bi, 41.6 Sn, 1 Pb	.3097	8.58
281	E	281	138	138	E	.3090	8.56
281299	281	299	138	148	50 Bi, 50 Sn	.2970	8.23
281333	281	333	138	167	43 Bi, 57 Sn	.2960	8.16
281338	281	338	138	170	60 Sn, 40 Bi	.2931	8.12
284324	284	324	140	162	48 Sn, 36 Pb, 16 Bi	.3170	8.78
291	E	291	144	144	E	.3361	9.31
291295	291	295	144	163	90 In, 10 Sn	.2710	7.51
291325	291	325	144	163	43 Pb, 43 Sn, 14 Bi	.3245	8.99
293	E	293	145	145	E	.3050	8.45
293325	293	325	145	162	75 In, 25 Pb	.2830	7.84
296	E	296	146	146	E	.2664	7.38
298300	298	300	148	149	80 In, 15 Pb, 5 Ag	.2834	7.85
307A	MP	307	MP	153	99.5 In, .5 Ga	.2639	7.31
307322	307	322	153	161	70 Sn, 18 Pb, 12 In	.2812	7.79
313	MP	313	MP	156.7	100 In	.2639	7.31
320345	320	345	160	174	70 In, 30 Pb	.2956	8.19
338	E	338	170	170	E	.2901	8.03
345365	345	365	174	185	60 In, 40 Pb	.3077	8.52
348	E	348	176	176	E	.2772	7.68
355	E	355	179	179	E	.3036	8.41
355410	355	410	179	210	55 Pb, 44 Sn, 1 Ag	.3289	9.10
355450	355	450	179	232	60 Pb, 37 Sn, 3 Ag	.3390	9.39
355500	355	500	179	260	50 Sn, 47 Pb, 3 Ag	.3198	8.86
356408	356	408	180	209	50 In, 50 Pb	.3198	8.86
361	E	361	183	183	E	.3032	8.40
361367	361	367	183	186	70 Sn, 30 Pb	.2946	8.16
361370	361	370	183	188	60 Sn, 40 Pb	.3068	8.50
361378	361	378	183	192	75 Sn, 25 Pb	.2888	8.00
361390	361	390	183	199	80 Sn, 20 Pb	.2834	7.85
361403	361	403	183	205	85 Sn, 15 Pb	.2780	7.70
361413	361	413	183	212	50 Sn, 50 Pb	.3202	8.87
361415	361	415	183	213	90 Sn, 10 Pb	.2726	7.55
361432	361	432	183	222	95 Sn, 5 Pb	.2679	7.42
361460	361	460	183	238	60 Pb, 40 Sn	.3350	9.28
361496	361	496	183	257	70 Pb, 30 Sn	.3509	9.72
361514	361	514	183	268	75 Pb, 25 Sn	.3595	9.96
380450	380	450	193	232	65 Pb, 35 In	.3420	9.47
383437	383	437	195	225	60 Pb, 40 In	.3350	9.30
390	E	390	199	199	E	.2626	7.27
422	E	422	217	217	E	.2730	7.30

E = Eutectic

